



ANNALS

OF THE SOUTH AFRICAN MUSEUM

CAPE TOWN



INSTRUCTIONS TO AUTHORS

1. MATERIAL should be original and not published elsewhere, in whole or in part.
2. LAYOUT should be as follows:
 - (a) *Centred masthead to consist of*
Title: informative but concise, without abbreviations and not including the names of new genera or species
Author's(s') name(s)
Address(es) of author(s) (institution where work was carried out)
Number of illustrations (figures, enumerated maps and tables, in this order)
 - (b) *Abstract* of not more than 200 words, intelligible to the reader without reference to the text
 - (c) *Table of contents* giving hierarchy of headings and subheadings
 - (d) *Introduction*
 - (e) *Subject-matter* of the paper, divided into sections to correspond with those given in table of contents
 - (f) *Summary*, if paper is lengthy
 - (g) *Acknowledgements*
 - (h) *References*
 - (i) *Abbreviations*, where these are numerous.

3. MANUSCRIPT, to be submitted in triplicate, should be typewritten and neat, double spaced with 3 cm margins all round. First lines of paragraphs should be indented. Tables and a list of captions for illustrations should be typed separately, their positions indicated in the text. All pages should be numbered consecutively.

Major headings of the paper are centred capitals; first subheadings are shouldered small capitals; second subheadings are shouldered italics; third subheadings are indented, shouldered italics. Further subdivisions should be avoided, as also enumeration (never roman numerals) of headings and abbreviations.

Footnotes should be avoided unless they are short and essential.

Only generic and specific names should be underlined to indicate italics; all other marking up should be left to editor and publisher.

4. ILLUSTRATIONS should be reducible to a size not exceeding 12 × 18 cm (19 cm including caption); the reduction or enlargement required should be indicated (and preferably uniform); originals larger than 35 × 47 cm should not be submitted; photographs should be rectangular in shape and final size. A metric scale should appear with all illustrations, otherwise magnification or reduction should be given in the caption; if the latter, then the final reduction or enlargement should be taken into consideration.

All illustrations, whether line drawings or photographs, should be termed figures (plates are not printed; half-tones will appear in their proper place in the text) and numbered in a single series. Items of composite figures should be designated by capital letters; lettering of figures is not set in type and should be in lower-case letters. If Letraset is used authors are requested to use Helvetica-style lettering, if possible.

The number of the figure should be lightly marked in pencil on the back of each illustration.

5. REFERENCES cited in text and synonymies should all be included in the list at the end of the paper, using the Harvard System (*ibid.*, *idem*, *loc. cit.*, *op. cit.* are not acceptable):

- (a) Author's name and year of publication given in text, e.g.:

'Smith (1969) describes . . .'
'Smith (1969: 36, fig. 16) describes . . .'
'As described (Smith 1969a, 1969b; Jones 1971)'
'As described (Haughton & Broom 1927) . . .'
'As described (Haughton *et al.* 1927) . . .'

Note: no comma separating name and year
pagination indicated by colon, not p.
names of joint authors connected by ampersand
et al. in text for more than two joint authors, but names of all authors given in list of references.

- (b) Full references at the end of the paper, arranged alphabetically by names, chronologically within each name, with suffixes *a*, *b*, etc., to the year for more than one paper by the same author in that year, e.g. Smith (1969a, 1969b) and not Smith (1969, 1969a).

For books give title in italics, edition, volume number, place of publication, publisher.
For journal article give title of article, title of journal in italics (according to the *World list of scientific periodicals*, 4th ed. London: Butterworths, 1963), series in parentheses, volume number, part number in parentheses, pagination (first and last pages of article).

Examples (note capitalization and punctuation)

- BULLOUGH, W. S. 1960. *Practical invertebrate anatomy*, 2nd ed. London: Macmillan.
FISCHER, P. H. 1948. Données sur la résistance et de la vitalité des mollusques. *Journal de conchyliologie* 88 (3): 100–140.
FISCHER, P. H., DUVAL, M. & RAFFY, A. 1933. Études sur les échanges respiratoires des littorines. *Archives de zoologie expérimentale et générale* 74 (33): 627–634.
KOHN, A. J. 1960a. Ecological notes on *Conus* (Mollusca: Gastropoda) in the Trincomalee region of Ceylon. *Annals and Magazine of Natural History* (13) 2 (17): 309–320.
KOHN, A. J. 1960b. Spawning behaviour, egg masses and larval development in *Conus* from the Indian Ocean. *Bulletin of the Bingham Oceanographic Collection, Yale University* 17 (4): 1–51.
THIELE, J. 1910. Mollusca. B. Polyplacophora, Gastropoda marina, Bivalvia. In: SCHULTZE, L. *Zoologische und anthropologische Ergebnisse einer Forschungsreise im westlichen und zentralen Süd-Afrika ausgeführt in den Jahren 1903–1905* 4 (15). *Denkschriften der medizinisch-naturwissenschaftlichen Gesellschaft zu Jena* 16: 269–270.

(continued inside back cover)

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ON THE AFFINITIES OF *COBBANOSCAPHITES*
COLLIGNON, 1969 (CRETACEOUS AMMONOIDEA)

By

WILLIAM JAMES KENNEDY
&
HERBERT CHRISTIAN KLINGER

Cape Town

Kaapstad

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ON THE AFFINITIES OF *COBBANOSCAPHITES* COLLIGNON, 1969
(CRETACEOUS AMMONOIDEA)

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(With 2 figures)

[MS accepted 25 May 1992]

ABSTRACT

The genus *Cobbanoscaphites* Collignon, 1969, from the Lower Campanian of Madagascar, is not a heteromorph ammonite of the superfamily Scaphitaceae, as originally described, but a pachydiscid microconch and a synonym of *Menuites* Spath, 1922.

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INTRODUCTION

In the course of a revision of the South African representatives of the heteromorph ammonite superfamily Scaphitaceae Gill, 1871, the authors recently examined the Madagascan representatives of the group described by Collignon (1963–1971), and currently housed in the Département des Sciences de la Terre, Dijon. The most distinctive form referred to the scaphites by Collignon was the genus *Cobbanoscaphites* Collignon, 1969, originally described and diagnosed as follows:

COBBANOSCAPHITES MENABENSIS nov. gen. nov. sp. G. T. (1) D: 0,080.–H: 0,043. (0,52).–E: 0,055. (0,69).–O: 0,023. (0,59) (?).

Ce *Scaphites* (unique exemplaire) paraît représenter un nouveau genre, défini par un ensemble de caractères empruntés à différents autres genres.

Ammonites massive, épaisse, subsphérique, à flancs plats fortement convexes et région externe un peu plus large que ceux-ci. Section largement semi-lunaire. Ombilic difficile à apprécier (probablement peu large) parce que, l'exemplaire étant creux, l'enlèvement de ce qui subsiste de la gangue ferait tomber les tours internes



Fig. 1. *Menuites menu* (Forbes, 1846). A-B. Paralectotype, BMNH C47599. C-D. Lectotype, BMNH C51048, from Pondicherry, South India. All figures are $\times 1$.

retenus par celle-ci; mais il est éminemment infundibuliforme (voir la Fig. de face). Ornementation de côtes basses, espacées, prenant librement naissance au sommet de la fosse ombilicale, et aboutissant, sur la chambre d'habitation seulement, à six très gros tubercules externes (qui n'existent pas sur la partie cloisonnée). Cloisons à premier lobe latéral trifide; deuxième lobe étroit; selles hautes et étalées.

Rapports et Différences.—L'ornementation de côtes est celle de *Desmoscaphites* (cf. Reeside, Eagle Sandstone. Pl. 22, Fig. 8), tandis que les très gros tubercules externes sont exactement ceux de *Acanthoscaphites* (cf. Nowak, Reeside, Cobban); mais ils n'existent que sur la chambre d'habitation. La cloison à le premier lobe de *Desmo-scaphites*, tandis que l'ensemble rappelle celle de *Cliosscaphites* (cf. Cobban. Scaphitoid Cephalopods of the Colorado Group. Pl. 20–21).

Zone à *Karapadites karapadensis*. Sous-Zone à *Maorites Aemilii*. Gisement 191 de la Coupe de Berere II (Belo sur Tsiribihina). Coll. M. Collignon, 1954.

(1) Le Genre est dédié à Mr. W. A. Cobban, Paléontologist Américain, auteur de nombreux Travaux sur le Genre *Scaphites*. (Collignon 1969: 51, pl. 533 (fig. 2097)).

Examination of the holotype, and only known specimen, showed that, rather than being a distinctive scaphite, it is an adult microconch pachydiscid, referable to the genus *Menuites* Spath, 1922, as is discussed below.

CONVENTIONS

All dimensions given below are in millimetres; D = diameter, Wb = whorl breadth, Wh = whorl height, U = umbilical diameter.

Figures in parentheses are dimensions as a percentage of the total diameter.

The suture terminology is that of Wedekind (1916), as reviewed by Kullmann & Wiedmann (1970), E = external lobe, L = lateral lobe, U = umbilical lobe, I = internal lobe.

SYSTEMATIC PALAEONTOLOGY

Class CEPHALOPODA

Order AMMONOIDEA Zittel, 1884

Suborder AMMONITINA Hyatt, 1889

Superfamily DESMOCERATACEAE Zittel, 1884

Family **Pachydiscidae** Spath, 1922

Genus *Menuites* Spath, 1922

[= *Neopachydiscus* Yabe & Shimizu, 1926; *Anapachydiscus* Yabe & Shimizu, 1926; *Besairieites* Collignon, 1931; *Cobbanoscaphites* Collignon, 1969]

Type species. *Ammonites menu* Forbes, 1846 (p. 111, pl. 10 (fig. 1)), by original designation of Spath (1922: 123).

Discussion

The type species of *Menuites*, *M. menu*, is based on a lectotype and six paralectotypes from the Upper Maastrichtian Valudavur Formation of Pondicherry, South India,